Official Draft Public Notice Version **May 23, 2018**
The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

FACT SHEET AND STATEMENT OF BASIS
ENERGY QUEEN MINE
RENEWAL PERMIT: DISCHARGE, STORMWATER
UPDES PERMIT NUMBER: UT0025712
MINOR INDUSTRIAL FACILITY

FACILITY CONTACT

Person Name:	Scott Bakken, P.G., Director
Position:	Permitting & Environmental Affairs
Phone Number:	(303) 389-4156
Facility Name:	Energy Fuels Resources (USA), Inc., Energy Queen Mine
Mailing Address:	225 Union Boulevard, Suite 600 Lakewood, CO 80228

DESCRIPTION OF FACILITY

Energy Fuels Resources Corporation leases and operates the Energy Queen Mine (Mine), which is an underground uranium and vanadium mine. The discharge treatment system for this facility consists of a chemical precipitation process with barium chloride. The intercepted mine water is pumped and mixed with barium chloride and then up to an initial treatment pond where the barium chloride assists in Radium reduction. The mine is located at 560 E. Highway 46, La Sal, UT 84535 in San Juan County, Utah at latitude 38°18'45" and longitude 109°18'30". The facility has a Standard Industrial Classification (SIC) code 1094, for Uranium mining.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

All limitations will remain the same as those in the previous permit. Based on the capacity of the existing treatment facility upon any future discharges, Energy Queen Mine is expected to be able to comply with the limitations.

DISCHARGE

DESCRIPTION OF DISCHARGE

The Energy Queen Mine is an existing, but inactive mine, which has not had a discharge of mine water for over 25 years. The Mine has been consistently reporting self-monitoring results on Discharge Monitoring Reports, via NetDMR on a monthly basis as required. There have been no discharges and no significant permit violations during the past five year permit term.

Outfall	Description of Discharge Point
001	Located at latitude 38°18'45" and longitude 109°18'30". Discharge would be from the mine water treatment system into West Coyote Wash.
002	Located at latitude 38°18'45" and longitude 109°18'30". Discharge would be from the mine water treatment system into West Coyote Wash.
003	Located at latitude 38°18'45" and longitude 109°18'30". Discharge would be from the mine water treatment system into West Coyote Wash.

RECEIVING WATERS AND STREAM CLASSIFICATION
The final discharge is to an unnamed dry wash, which is tributary to Kane Springs Creek and classified as 2B, 3C and 4 according to *Utah Administrative Code (UAC) R317-2-13.*

Class 2B -- Protected for secondary contact recreation such as boating, wading, or similar uses.
Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS
Effluent limits for total suspended solids (TSS), total uranium, total radium 226, dissolved radium 226, chemical oxygen demand (COD), and total zinc are technology based standards for uranium ore mines found in 40 CFR 440.32 and 440.33. The pH limit is based on current Utah Secondary Treatment standards. The oil & grease limit is based on best professional judgment (BPJ) and is consistent with other industrial permitted facilities in Utah.

Total dissolved solids (TDS) limitations are based upon Utah Water Quality Standards for concentration values and the Colorado River Basin Salinity Control Forum (CRBSCF) for mass loading values when applicable as authorized in *UAC R317-2-4*. Discharges from the Energy Queen Mine facility could potentially reach the Colorado River, which places it under the requirements of the CRBSCF. In accordance with the CRBSCF policies, the effluent will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year. The TDS concentration limit is the same as similar uranium mining facilities in the immediate area and is based on BPJ, which is more stringent than the Utah Water Quality Standard of 1,200 mg/L for TDS.

Effluent limitations may also be derived using a Wasteload Analysis (WLA). The WLA incorporated Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During the UPDES renewal development, a WLA and ADR were performed. An ADR Level I review was performed and concluded that an ADR Level II review was not required. It has been determined that this discharge will not cause a violation of water quality standards. An Antidegradation Level II review is not required since the Level I

review shows that water quality impacts are minimal. The permittee is expected to be able to comply with these limitations. The WLA indicates that the effluent limitations should be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters.

Reasonable Potential Analysis
Since January 1, 2016, DWQ has conducted reasonable potential (RP) analysis on all new and renewal applications received after that date following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). A formal RP analysis for this permit renewal was not conducted because there has been a lack of discharge data from the Mine, which currently remains inactive. Once the Mine begins operating and discharging regularly, a qualitative RP analysis can then be performed on subsequent permit renewals as appropriate.

The permit limitations are as follows:

Effluent Limitations for Outfalls 001, 002, 003 b/, c/			
Parameter	Monthly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	0.5	NA	NA
TSS, mg/L	20	NA	30
Total Uranium, mg/L	2.0	NA	4.0
Total Radium 226, pCi/L	10	NA	30
Dissolved Radium 226, pCi/L	3	NA	10
COD, mg/L	100	NA	200
Total Zinc, mg/L	0.5	NA	1.0
Total Dissolved Solids, mg/L	NA	NA	1000
Total Dissolved Solids, tons/day a/	NA	NA	1.0
Oil & Grease, mg/L d/	NA	NA	10
pH, standard units	NA	6.5	9.0

NA – Not Applicable; MGD – million gallons per day; mg/L – milligrams per liter

a/ TDS will be limited to a maximum discharge of 1.0 ton per day or 366 tons per year, with daily maximum tonnages reported monthly. It is the permittee's responsibility to monitor and report the actual discharge of TDS for each monitoring period.

b/ There shall be no discharge of floating solids or visible foam in other than trace amounts.

c/ There shall be no discharge of sanitary wastes.

d/ An Oil and grease sample shall be taken when a sheen is present or visible. If no sheen is present or visible, report NA.

SELF-MONITORING AND REPORTING REQUIREMENTS
The following self-monitoring requirements are the same as in the previous permit. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report

(DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Self-Monitoring and Reporting Requirements				
Parameter	Frequency	Sample Type	Units	Reporting Frequency
Total Flow	Continuous	Recorder	GPM	Monthly
TSS	Monthly	Grab	mg/L	Monthly
Total Uranium	Monthly	Grab	mg/L	Monthly
Total Radium 226	Monthly	Grab	pCi/L	Monthly
Dissolved Radium 226	Monthly	Grab	pCi/L	Monthly
COD	Quarterly	Grab	mg/L	Quarterly
Total Zinc	Quarterly	Grab	mg/L	Quarterly
TDS	Quarterly	Grab	mg/L	Quarterly
TDS	Quarterly	Grab	ton/day	Quarterly
Oil & Grease	Quarterly	Visual/Grab	mg/L	Quarterly
pH	Monthly	Grab	SU	Monthly

The permitee is required to sample and submit the analysis of the pollutants listed in 40 CFR Part 122 Appendix D Table III (Other Toxic Pollutants (Metals and Cyanide) and Total Phenols) occurring from the first discharge of the facility.

STORM WATER

STORMWATER REQUIREMENTS
Storm water provisions are included in this combined UPDES permit.

The storm water requirements are based on the UPDES Multi-Sector General Permit for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000 (MSGP). All sections of the MSGP that pertain to discharges from wastewater treatment plants have been included and sections which are redundant or do not pertain have been deleted.

The permit requires the preparation and implementation of a storm water pollution prevention plan for all areas within the confines of the plant. Elements of this plan are required to include:

1. The development of a pollution prevention team:
2. Development of drainage maps and materials stockpiles:
3. An inventory of exposed materials:
4. Spill reporting and response procedures:
5. A preventative maintenance program:
6. Employee training:
7. Certification that storm water discharges are not mixed with non-storm water discharges:
8. Compliance site evaluations and potential pollutant source identification, and:

9. Visual examinations of storm water discharges.

PRETREATMENT REQUIREMENTS

This facility does not discharge process wastewater to a sanitary sewer system. Any process wastewater that the facility may discharge to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to federal, state, and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, the permittee shall comply with all applicable federal general pretreatment regulations promulgated, found in 40 CFR 403, the state's pretreatment requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring). Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317-2-7.2.

The permittee is a minor industrial facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Also, the receiving waterway is regularly dry; therefore there is not any available data to conclude an impairment to the waterway. Based on these considerations and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Jeff Studenka, Discharge
Lonnie Shull, Biomonitoring
Michael George, Storm Water
Nate Nichols, Reasonable Potential Analysis
Dave Wham, Wasteload Analysis
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ATTACHMENT 1: Wasteload Analysis

PUBLIC NOTICE INFORMATION (to be completed after public notice)

Began: Month Day, Year
Ended: Month Day, Year

Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit will be published in the San Juan Record.

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes they were not considered Major and the permit is not required to be re Public Noticed.

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ATTACHMENT 1

Wasteload Analysis

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